

CLAIMS

1. A method, comprising:

monitoring an electronic document for user annotations;

recognizing entry of an annotation into the electronic document;

locating information related to the annotation using the annotation and the context data; and

collecting context data proximal to the annotation.

2. The method as recited in claim 1, wherein the collecting context data further comprises extracting one or more words from text proximal to the annotation.

3. The method as recited in claim 1, wherein the collecting context data further comprises locating objects near to an annotation object in a document object model (DOM) associated with the annotation.

4. The method as recited in claim 1, wherein the collecting context data further comprises:

defining a first distance from the annotation;

defining a second distance from the annotation;

locating one or more keywords that are within the first distance from the annotation;

locating one or more keywords that are within the second distance from the annotation but not within the first distance from the annotation;

1 weighting the one or more keywords according to their distance from the
2 annotation, with keywords within the first distance having a greater weight than
3 keywords within the second distance but not within the first distance; and

4 wherein the locating information related to the annotation utilizes the
5 keywords according to the weights assigned thereto.

6
7 5. The method as recited in claim 1, wherein the collecting context data
8 further comprises:

9 deriving at least two search terms;
10 comparing the search terms to a history of search terms; and
11 weighting each of the search terms according to whether a particular search
12 term is included in the history of search terms, a higher weight being assigned to a
13 search term that is included in the history of search terms.

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15 6. The method as recited in claim 5, wherein the history of search terms
16 further comprises a history of search terms used by a particular user.

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18 7. The method as recited in claim 5, wherein the history of search terms
19 further comprises a history of search terms used by all users of a particular group
20 of users.

21
22 8. The method as recited in claim 1, wherein the locating information
23 related to the annotation further comprises searching the electronic document for
24 terms that match or are similar to the annotation.

1 **9.** The method as recited in claim 1, wherein the locating information
2 related to the annotation further comprises searching remote sites for documents
3 containing terms that match or are similar to the annotation.
4

5 **10.** The method as recited in claim 1, wherein the locating information
6 related to the annotation further comprises:

7 determining keywords that are likely to be of interest to a user based on the
8 annotation and words contained in previous documents accessed by the user; and
9 using the keywords to locate information.
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11 **11.** The method as recited in claim 5, wherein the previous documents
12 are limited to documents accessed within a specified time period.
13

14 **12.** The method as recited in claim 1, wherein the locating information
15 related to the annotation further comprises:

16 determining keywords that are likely to be of interest to a user based on the
17 annotation and words occurring with the annotations in previous documents
18 accessed by the user; and
19 using the keywords to locate information.
20

21 **13.** The method as recited in claim 1, wherein an annotation further
22 comprises one of the following types of annotations: circle, underline, block,
23 arrow, callout, free note, post-it note.
24
25

1 **14.** A system, comprising:
2 an annotation monitoring module configured to monitor an electronic
3 document for entry of an annotation;
4 an extraction module configured to collect context data that appears near an
5 annotation entered into the electronic document and to extract one or more
6 keywords from the context data;
7 an information processing module configured to utilize the annotation and
8 the keywords to locate related content.

9
10 **15.** The system as recited in claim 14, further comprising a history
11 module that includes one or more historical keywords that were previously used in
12 the system; and

13 wherein the extraction module is further configured to weight keywords
14 according to whether or not the keywords are included in the history module.

15
16 **16.** The system as recited in claim 14, wherein:
17 the context data further comprises a plurality of keywords derived from text
18 proximal to the annotation;
19 the extraction module is further configured to weight each keyword
20 according to a relative distance that the keyword is from the annotation; and
21 the information processing module is further configured to initiate a search
22 based on the annotation and the weighted keywords.

1 **17.** The system as recited in claim 16, wherein the search is performed
2 using the annotation as a search term and the results of the search are re-ranked
3 according to the weighted keywords.

4
5 **18.** The system as recited in claim 16, wherein the search is performed
6 using a query derived from the annotation and the weighted keywords.

7
8 **19.** The system as recited in claim 14, wherein the related content
9 located by the information processing module further comprises keywords
10 contained in the electronic document.

11
12 **20.** The system as recited in claim 14, wherein the related content
13 located by the information processing module further comprises documents on a
14 network that contain one or more of the keywords.

15
16 **21.** The system as recited in claim 14, wherein the information
17 processing module is further configured to determine suggested keywords that are
18 likely to be of interest to the user based on the annotation and words appearing in
19 other documents accessed by the user wherein the same annotation was entered.

20
21 **22.** The system as recited in claim 21, further comprising a user
22 interface configured to present the suggested keywords to the user and provide for
23 selection of none or one or more of the suggested keywords by the user.

1 **23.** One or more computer-readable media containing computer-
2 executable instructions that, when executed on a computer, perform the following
3 steps:

4 recognizing an annotation entered into an electronic document by a user;
5 collecting context data related to the location of the annotation; and
6 locating additional content that may be of interest to the user by executing a
7 search with one or more words indicated by the annotation and one or more
8 keywords derived from the context data.

9
10 **24.** The one or more computer-readable media as recited in claim 23,
11 wherein the annotation is an annotation included in the following set of
12 annotations: a circle, a box, an arrow, an underline, a double underline, a bracket,
13 a highlight, a handwritten character, a free note, a post-it note.

14
15 **25.** The one or more computer-readable media as recited in claim 23,
16 wherein the collecting context data related to the location of the annotation further
17 comprises collecting objects occurring within a certain distance from an
18 annotation object in a document object model associated with the annotation
19 object.

20
21 **26.** The one or more computer-readable media as recited in claim 23,
22 wherein the locating additional content further comprises locating one or more
23 local keywords in the electronic document.

1 **27.** The one or more computer-readable media as recited in claim 23,
2 wherein the locating additional content further comprises locating one or more
3 documents on a network that include one or more words indicated by the
4 annotation or one or more keywords derived from the context data.

5
6 **28.** The one or more computer-readable media as recited in claim 23,
7 wherein the locating additional content further comprises deriving the one or more
8 keywords from the context data by identifying words that frequently appear with
9 the annotation in other documents accessed by the user.

10
11 **29.** The one or more computer-readable media as recited in claim 23,
12 wherein the locating additional content further comprises deriving the one or more
13 keywords from the context data by identifying words that frequently appear with
14 the annotation in other documents accessed by the user.

15
16 **30.** The one or more computer-readable media as recited in claim 23,
17 further comprising:
18 weighting the keywords;
19 ranking search results according to the weighted keywords.

1 **31.** The one or more computer-readable media as recited in claim 30,
2 further comprising the step of referring to a keyword history list that includes
3 keywords previously used by a current user, and wherein the weighting the
4 keywords further comprises assigning a higher weight to keywords includes in the
5 keyword history list.

6
7 **32.** The one or more computer-readable media as recited in claim 30,
8 further comprising the step of referring to a keyword history list that includes
9 keywords previously used by all users in a group of users, and wherein the
10 weighting the keywords further comprises assigning a higher weight to keywords
11 includes in the keyword history list.